



Clean Version

Claim 1 (*Currently amended*): A process for removal of impurities from Nitric Oxide gas, for research, industrial, semiconductor, medical, and analytical application, comprising: (a) providing a flow of impure Nitric Oxide, (b) passing this gaseous mixture through a first filter composed by a mixture of hydroxides of alkali and earth alkali metals, (c) passing the mixture through a second filter system, (d) collecting the purified gas in a sealed delivery tank.

Claim 2 (*Currently amended*): The process for removal of impurities according to claim one, further comprising: maintaining the temperature of said first filter between 50 and 200 degrees Kelvin.

Claim 3 (*Original*): The process for removal of light impurities according to claim 2, further comprising: maintaining a pressure between 0.1 and 1,000 atmospheres inside said delivery tank.

Claim 4 (*Original*): The process for removal of impurities according to claim 1, further comprising: retaining impurities in said first filter and in said second filter.

Claim 5 (*Currently amended*): The process for removal of impurities according to claim 1, wherein the impurities are selected from a group consisting of nitrogen dioxide (NO₂), sulfur dioxide (SO₂), methane (CH₄), oxygen (O₂), carbon

monoxide (CO), carbon dioxide (CO₂), ozone (O₃), water (H₂O), ammonia (NH₃), nitrous oxide (N₂O) and volatile hydrocarbons.

Claim 6 (*Canceled*)

Claim 7 (*Original*): The process for removal of impurities from nitric oxide according to claim 1 where the mixture of hydroxides of alkali and earth alkali metals contains sodium hydroxide.

Claim 8 (*Currently amended*): The process for removal of impurities from nitric oxide according to claim 1 where the mixture of hydroxides of alkali and earth alkali metals is selected by the group consisting of: sodium hydroxide, barium hydroxide, calcium hydroxide, lithium hydroxide, magnesium hydroxide, potassium hydroxide, strontium hydroxide, cesium hydroxide, francium hydroxide, and silica hydroxide.

Claim 9 (*Original*): The process for nitric oxide purification according to claim 1, wherein said mixture of hydroxides of alkali and earth alkali metals is replaced upon depletion.

Claim 10 (*Original*): The process for nitric oxide purification according to claim 1, wherein said second filter contains a molecular sieve.

Claim 11 (*Original*): The process for nitric oxide purification according to claim 1, wherein said second filter is regenerated by flushing a dry gas and by heat.

Claim 12 (*Original*): The process for nitric oxide purification according to claim 1, wherein said nitric oxide conveyed to said delivery tank has a percentage of impurities between 0% and 1 %.

Claim 13-20 (*Withdrawn*)